

Mineral Industry Surveys

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COBALT IN DECEMBER 2001

On the basis of preliminary data, U.S. consumption of cobalt in 2001 was 5% lower than that during 2000, according to the U.S. Geological Survey. The cobalt content of U.S. imports of cobalt metal and chemicals was 9% higher during January through November 2001 than that of imports during the same period in 2000. The cobalt content of U.S. exports of unwrought cobalt and chemicals was 26% higher during January through November 2001 than that during the same period in 2000. Trade data for December 2001 will be available in a subsequent issue.

Note

With the exception of prices, all data in this report have been rounded to no more than three significant digits. Totals

and percentages were calculated by using unrounded data.

Price

Prices for electrolytic cobalt, in dollars per pound, from Platts Metals Week are listed below.

<u>Date</u>	<u>Price range</u>
January 17	6.95-7.95
January 24	6.95-7.50
January 31	6.95-7.25
February 7	6.95-7.25

<u>Month</u>	<u>Average price</u>
January	7.32

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Metal 2/	Oxide and other chemical compounds 3/	Scrap	Total
2000:				
December	283	145	207	635
January-December 4/	3,660	1,840	2,530	8,030
Year 5/	4,320	1,840	2,550	8,700
2001:				
January	296	142	211	649
February	303	145	211	659
March	321	143	210	673
April	308	122	209	640
May	298	120	210	627
June	281	147	209	638
July	303	117	209	629
August	283	110	209	602
September	279	137	209	626
October	302	104	209	615
November	312	105	209	627 r/
December	309	112	209	631
January-December	3,600	1,500	2,520	7,620

r/ Revised.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes metal powder.

3/ Data may include other cobalt materials.

4/ Data based on monthly reports.

5/ Includes annual reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE 1/

(Metric tons, contained cobalt)

End use	2000		2001	
	January- December 2/	Year 3/	December	January- December 4/
Steel	163	163	14	207
Superalloys	3,590	3,800	322	3,620
Magnetic alloys	510	544	53	683
Other alloys 5/	W	1,020	W	W
Cemented carbides 6/	760	760	62	798
Chemical and ceramic uses 7/	2,350	2,360	155	2,020
Miscellaneous and unspecified	654	63	24	297
Total	8,030	8,700	631	7,620

W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Data based on monthly reports.

3/ Includes annual reports.

4/ May include revisions to prior months.

5/ Includes nonferrous alloys, welding materials, and wear-resistant alloys.

6/ Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

7/ Includes catalysts, driers in paints or related usage, feed or nutritive additive, glass decolorizer, ground coat frit, pigments, and other uses.

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Industry 2/				U.S. Government, metal 5/
	Metal 3/	Oxide and other chemical compounds 4/	Scrap	Total	
December 6/	322	232	158	713	10,200
Yearend 7/	370	252	159	780	10,200
2001:					
January	342 r/	200	165	708 r/	10,200
February	340 r/	200	164	704 r/	9,810
March	335 r/	195	163	693 r/	9,780
April	363 r/	214	163	740 r/	9,120
May	335 r/	211	163	709 r/	8,850
June	300 r/	196	163	659 r/	8,480
July	298 r/	219	163	680 r/	8,420
August	319 r/	236	163	718 r/	8,260
September	313 r/	238	163	713 r/	8,180
October	339 r/	230	162	732 r/	NA
November	325 r/	223 r/	163	711 r/	NA
December 6/	335	212	163	710	NA

r/ Revised. NA Not available.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Stocks reported by cobalt processors and consumers.

3/ Includes metal powder.

4/ Data may include other cobalt materials.

5/ Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

6/ Data based on monthly reports.

7/ Includes annual reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
2000:								
November	572,000	\$16,300,000	125,000	\$2,920,000	83,500	\$544,000	684,000	7,910,000
December	700,000	19,200,000	144,000	3,400,000	211,000	1,320,000	860,000	8,770,000
January-December	7,210,000	213,000,000	1,540,000	37,100,000	1,710,000	11,000,000	8,770,000	XX
2001:								
January	563,000	15,600,000	185,000	4,400,000	80,400	457,000	717,000	717,000
February	714,000 7/	17,000,000 7/	136,000	3,140,000	124,000	699,000	843,000	1,560,000
March	615,000	16,700,000	96,400 7/	2,050,000 7/	256,000	1,320,000	753,000	2,310,000
April	679,000	18,600,000	106,000	2,400,000	234,000	1,240,000	817,000	3,130,000
May	836,000 7/	21,100,000 7/	50,600	1,210,000	80,400	518,000	896,000	4,030,000
June	687,000	16,300,000	152,000	2,820,000	84,700	486,000	820,000	4,850,000
July	525,000	12,500,000	119,000	2,090,000	184,000	966,000	658,000	5,500,000
August	646,000	14,300,000	106,000	1,910,000	174,000	872,000	768,000	6,270,000
September	569,000	12,300,000	64,600	1,310,000	198,000	973,000	668,000	6,940,000
October	826,000	16,400,000	91,900	1,760,000	332,000	1,690,000	982,000	7,920,000
November:								
Australia	--	--	--	--	--	--	--	153,000
Belgium	22,600	531,000	46,300	724,000	--	--	55,900	500,000
Brazil	40,000	692,000	--	--	--	--	40,000	286,000
Canada	50,600	1,000,000	--	--	--	--	50,600	791,000
China	--	--	2	2,300	--	--	1	65,900
Congo (Kinshasa)	79,700	1,170,000	--	--	--	--	79,700	682,000
Finland	35,500	950,000	26,600	396,000	120,000	504,000	86,600	1,890,000
France	519	32,300	1,000	35,300	--	--	1,240	37,800
Germany	1,980	49,900	--	--	--	--	1,980	34,500
India	--	--	--	--	--	--	--	267
Italy	--	--	--	--	--	--	--	6,600
Japan	825	48,900	202	16,600	--	--	970	35,100
Korea, Republic of	--	--	--	--	--	--	--	805
Morocco	20,000	346,000	--	--	--	--	20,000	192,000
Norway	197,000	3,170,000	--	--	--	--	197,000	1,240,000
Philippines	--	--	--	--	3,630	36,200	1,670	4,260
Russia	90,200	1,540,000	--	--	--	--	90,200	1,450,000
South Africa	1,750 7/	252,000 7/	--	--	--	--	1,750	600,000
Sweden	--	--	--	--	--	--	--	453
Switzerland	--	--	--	--	--	--	--	77
Taiwan	--	--	--	--	--	--	--	9,420
Uganda	--	--	--	--	--	--	--	59,700
United Kingdom	20,400 7/	74,200 7/	6,910	158,000	18,700	114,000	29,900	142,000
Zambia	42,300	687,000	--	--	--	--	42,300	435,000
Total	603,000	10,500,000	81,000	1,330,000	142,000	654,000	700,000	8,620,000

XX Not applicable. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder.

3/ Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

4/ Customs value.

5/ Estimated from gross weights.

6/ May include revisions to prior months.

7/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Other cobalt: matte, waste and scrap 2/		Wrought cobalt and cobalt articles	
	Quantity	Value 3/	Quantity	Value 3/	Quantity	Value 3/
2000:						
November	39,400	\$1,650,000	22,700	\$176,000	17,800	\$1,110,000
December	7,120	163,000	20,800	133,000	21,000	1,230,000
January-December	214,000	6,390,000	550,000	4,110,000	359,000	18,800,000
2001:						
January	2,200	66,500	122,000 4/	1,880,000 4/	27,500	1,570,000
February	4,920	116,000	77,200 4/	1,620,000 4/	24,900	1,380,000
March	4,090	87,100	49,200 4/	381,000 4/	26,700	1,490,000
April	4,250	91,900	67,000	1,550,000	13,100	839,000
May	8,030	193,000	22,600 4/	823,000 4/	25,100	813,000
June	22,200	445,000	67,400 4/	888,000 4/	14,600	980,000
July	6,570	147,000	57,400 4/	537,000 4/	14,500	989,000
August	3,480	64,600	46,400 4/	1,060,000 4/	13,200	845,000
September	1,140	51,500	18,500 4/	515,000 4/	15,400	947,000
October	3,410	105,000	32,000 4/	709,000 4/	19,400	1,170,000
November:						
Australia	5,000	60,800	10,700 4/	172,000 4/	--	--
Austria	265	14,200	--	--	--	--
Belgium	1,820	36,600	--	--	2,070	39,500
Canada	236	46,100	174	2,120	1,480	250,000
China	--	--	--	--	18	15,600
France	--	--	2,600 4/	170,000 4/	2,700	143,000
Germany	--	--	2,040 4/	50,100 4/	235	8,570
Ireland	--	--	6,030	94,200	10	2,020
Japan	336	18,300	520	5,750	2,240	94,600
Sweden	2,180	49,600	--	--	--	--
United Kingdom	963	24,100	386 4/	24,800 4/	8,240	474,000
Total	10,800	250,000	22,400	519,000	17,000	1,030,000

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes other intermediate products of cobalt metallurgy; may include other cobalt-bearing materials from which cobalt is extracted, or from which cobalt-containing chemical compounds are manufactured.

3/ Customs value.

4/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS 1/

(Kilograms, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
2000:								
November	110,000	\$4,500,000	12,000	\$408,000	12,800	\$146,000	121,000	2,370,000
December	165,000	5,280,000	107,000	646,000	81,200	346,000	261,000	2,630,000
January-December	1,520,000	54,500,000	1,320,000	11,700,000	676,000	3,650,000	2,630,000	XX
2001:								
January	93,500	3,140,000	200,000	1,540,000	26,500	263,000	244,000	244,000
February	216,000	6,020,000	131,000	823,000	13,200	124,000	313,000	557,000
March	166,000	5,700,000	171,000	1,220,000	14,400	90,700	292,000	850,000
April	141,000	4,550,000	210,000	1,530,000	19,500	192,000	298,000	1,150,000
May	220,000	5,590,000	84,200	654,000	26,100	209,000	287,000	1,430,000
June	204,000	5,460,000	116,000 7/	1,070,000 7/	39,000	334,000	297,000	1,730,000
July	146,000	3,960,000	211,000 7/	1,160,000 7/	30,000	231,000	306,000	2,040,000
August	189,000	5,270,000	27,400 7/	241,000 7/	29,800	173,000	216,000	2,250,000
September	186,000	4,730,000	32,100	473,000	3,030	27,100	210,000	2,460,000
October	184,000	5,100,000	6,530	155,000	35,400	221,000	197,000	2,660,000
November	306,000	4,520,000	41,600	581,000	7,770	34,300	338,000	3,000,000

XX Not applicable.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ May include other intermediate products of cobalt metallurgy, and unwrought cobalt alloys.

3/ Cobalt acetates and cobalt chlorides.

4/ Free alongside ship (f.a.s.) value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES 1/

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value 2/	Quantity	Value 2/
2000:				
November	66,600	\$3,680,000	--	--
December	50,200	1,650,000	54,300	\$61,500
January-December	971,000	37,800,000	691,000	3,430,000
2001:				
January	56,500	1,790,000	42,000 3/	169,000 3/
February	89,000	2,070,000	--	--
March	118,000	3,040,000	75,200 3/	477,000 3/
April	55,000	1,860,000	95,000 3/	677,000 3/
May	44,100	2,250,000	23,200 3/	54,900 3/
June	31,300	2,200,000	95,800 3/	63,100 3/
July	73,800	2,040,000	78,300 3/	342,000 3/
August	66,400	2,320,000	21,400 3/	321,000 3/
September	50,700	1,990,000	71,500 3/	446,000 3/
October	30,600	1,250,000	19,400 3/	411,000 3/
November	42,600	1,960,000	2,400 3/	58,700 3/

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Free alongside ship (f.a.s.) value.

3/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.